

TOWNSEND and TOWNSEND and CREW LLP

By

Therese J. Parker

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. National Phase of
PCT/US2004/043114 of:

Saeed R. Khan

Application No.: Not yet assigned

Filed: Herewith

For: BORONIC ACID ARYL
ANALOGS

Confirmation No.:

Examiner:

Art Unit:

INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR §1.97 and
§1.98

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08A and PTO/SB/08B are being called to the attention of the Examiner. Copies of the references in compliance with the requirements of 37 CFR §1.98(a)(2) are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

Also enclosed is a copy of an International Search Report dated May 17, 2005, which was filed in corresponding PCT application no. PCT/US04/043114, and in which these references were filed.

As provided for by 37 CFR §1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement, because this submission is prior to the issuance of a first Office Action on the merits.

However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,


Kawai Lau
Reg. No. 44,461

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90803062 v1

Substitute for form 1448A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	
		Filing Date	
		First Named Inventor	Khan, Saeed R.
		Art Unit	
		Examiner Name	
(Use as many sheets as necessary)		Attorney Docket Number	018890-000200US
Sheet	1	of	3

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear ³
	AA	US-			
	AB	US-			
	AC	US-			
	AD	US-			
	AE	US-			
	AF	US-			
	AG	US-			
	AH	US-			
	AI	US-			
	AJ	US-			
	AK	US-			
	AL	US-			
	AM	US-			
	AN	US-			
	AO	US-			
	AP	US-			
	AQ	US-			
	AR	US-			

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear ³	T ⁴
		Country Code ⁵	Number ⁶	Kind Code ⁷ (if known)				
	AS	EP	0647511	A1	10/06/1999	F. Hoffmann-La Roche AG		<input type="checkbox"/>
	AT	PCT	WO91/17749	A1	11/28/1991	Baylor College of Medicine		<input type="checkbox"/>
	AU	PCT	WO03/06384	A2	12/24/2003	Johns Hopkins University		<input type="checkbox"/>
	AV							<input type="checkbox"/>
	AW							<input type="checkbox"/>

Examiner Signature	Date Considered
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* EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard S1.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO		Complete if Known Application Number Filing Date First Named Inventor Art Unit Examiner Name Attorney Docket Number	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Khan, Saeed R. 018890-000200US	
Sheet	2	of	3

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	AX	KUMAR, S.K., et al. "Design, Synthesis, and Evaluation of Novel Boronic-Chalcone Derivatives as Antitumor Agents", <i>Journal of Medicinal Chemistry</i> (2003) 46(14):2813-2815	<input type="checkbox"/>
	AY	BOUGET, K., et al. "Hydrazino-Aza and N-Azaeptoids with Therapeutic Potential as Anticancer Agents", <i>Bioorganic & Medicinal Chemistry</i> (2003) 11(23):4661-4889	<input type="checkbox"/>
	AZ	YANG, W., et al. "Boronic Acid Compounds As Potential Pharmaceutical Agents", <i>Medicinal Research Reviews</i> (2003) 23(3):346-368	<input type="checkbox"/>
	BA	DICESARE, N., et al. "Chalcone-analogue fluorescent probes for saccharides signaling using the boronic acid group", <i>Tetrahedron Letters</i> (2002) 43(14):2815-2818	<input type="checkbox"/>
	BB	SERAFIN, B. et al. "Arylborenic Compounds - VIII", <i>Tetrahedron</i> (1963) 19:621-626	<input type="checkbox"/>
	BC	CATLIN, Joseph C., et al. "Synthesis, Reactions, and Mass Spectral Studies of Some Cyclic Amine-Boranes and Their Catechol Derivatives", <i>The Journal of Organic Chemistry</i> (1969) 34(6):1684-1686	<input type="checkbox"/>
	BD	CATLIN, Joseph C., et al. "Preparation and Reactions of o-(Cyanomethyl)benzeneboronic Acid", <i>The Journal of Organic Chemistry</i> (1969) 34(6):1660-1663	<input type="checkbox"/>
	BE	SNYDER, H.R., et al. "Synthesis of Aromatic Boronic Acids, Aldehyde Boronic Acids and a Boronic Acid Analog of Tyrosine", <i>Journal of the American Chemical Society</i> (1958) 80:835-838	<input type="checkbox"/>
	BF	FU, J.-m, et al. "Connections to the Directed Ortho Metalation Strategy. Pd(0)-Catalyzed Cross Coupling of Aryl Boronic Acids with Aryl Triflates", <i>Tetrahedron Letters</i> (1990) 31(12):1665-1668	<input type="checkbox"/>
	BG	STRACHAN, Jon-Paul, et al. "The preparation of some 1,7b-disubstituted cyclopropa[c] isoquinolines via nitril ylide cyclisations and their rearrangement to 2-benzazepines and 4-alkenyl-1,4-dihydroisoquinolines", <i>Journal of the Chemical Society, Perkin Transactions 1</i> (1998) 13:807-812	<input type="checkbox"/>
	BH	YANG, N. et al. "Nickel-Catalyzed Cross-Couplings of Cyclohexenyl Phosphate and Arylborenic Acids", <i>Tetrahedron Letters</i> (1999) 40(17):3321-3324	<input type="checkbox"/>

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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Application Number	
		Filing Date	
		First Named Inventor	Khan, Saeed R.
		Art Unit	
		Examiner Name	
Sheet	3	of	3
		Attorney Docket Number	018890-000200US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume/issue number(s), publisher, city and/or country where published.	T ²
	BI	KOBAYASHI, Yuichi, et al. "Zinc Borates: Functionalized Hard Nucleophiles for Coupling Reactions with Secondary Allylic Acetates", <i>European Journal of Organic Chemistry</i> (2000) 3525-3834	<input type="checkbox"/>
	BJ	FALCK, J.R., et al. "Bromo-Boronolactonization of Olefins", <i>The Journal of Organic Chemistry</i> (2001) 66(21):7148-7150	<input type="checkbox"/>
	BK	FALCK, J.R., et al. "Homocoupling of alkyl-, alkanyl-, and arylboronic acids", <i>Tetrahedron Letters</i> (2002) 43(45):8149-8151	<input type="checkbox"/>
	BL	JIANG, Weiqin, et al. "Furoyl and Benzofuroyl Pyrroloquinolones as Potent and Selective PDE5 Inhibitors for Treatment of Erectile Dysfunction", <i>Journal of Medicinal Chemistry</i> (2003) 46(3):441-444	<input type="checkbox"/>
	BM	Database Beilstein, Beilstein Crossfire Institut Zur Foerderung Der Chemischen Wissenschaften; Citation No. 2508506; BRN 488408 1991, XP002327019, Abstract & Serafin, et al: <i>Roczniki Chemii Annales Societatis Chimicae Polonorum</i> , (1961) 35:359-362	<input type="checkbox"/>
	BN	ROBERTS, David C., et al. "Pluripotential Amino Acids I. (L)-p-Dihydroxyborylphenylalanine (L-Bph) as a Precursor of L-Phe and L-Tyr Containing Peptides; Specific Tritiation of L-Phe-Containing Peptides at a Final Step in Synthesis", <i>Tetrahedron Letters</i> (1980) 21(36):3435-3438	<input type="checkbox"/>
	BO		<input type="checkbox"/>

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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.